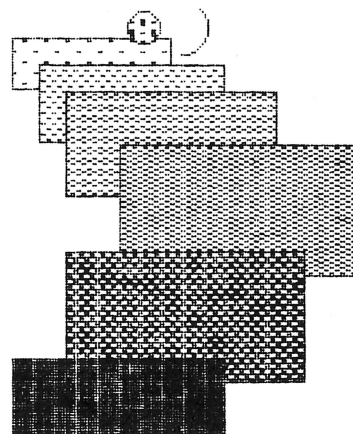
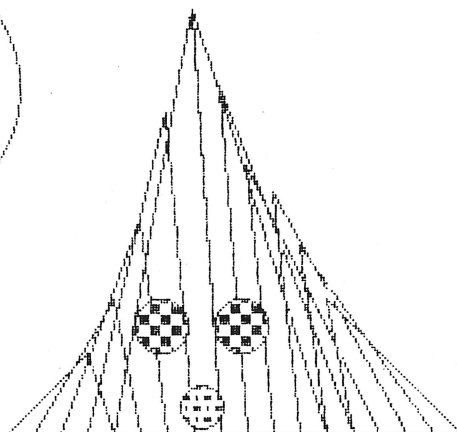
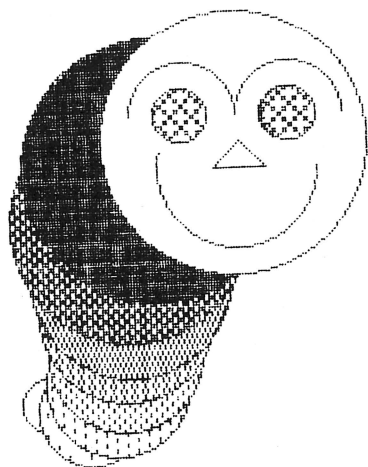


EPSON Connection

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A WORD FROM YOUR EDITOR

Our users group has doubled in size and continues to expand daily. We are now an international group, having new members in Kartoum, Sudan (Africa); Oslo, Norway; Canada and the Virgin Islands. Welcome to all our new members!

We have included corrections to the graphics program reprinted in the last issue, and we sincerely apologize for any inconvenience to you.

This newsletter represents a "special" issue for the holidays. We hope you will let us know how you feel about the inclusion of advertising. We count on you for feedback, and have been pleased with your comments and letters. The next issue will not include advertising and we hope this will give all of us an opportunity to evaluate whether or not we want to include advertising in the newsletter.

Local users groups are starting all over the country. We have received a wonderful response from users who have volunteered to help start local groups. We have included a page of individuals and groups to contact throughout the country. We hope you will get in contact with them.

There has been a tremendous increase in software being created for both the HX and QX computers. We are attempting to collate the information to share with all users. Please send in names of new software, hardware, and peripherals specifically for the Epson computers as you hear about them.

Our bulletin board will be available soon. The phone number is (313) 823-1425, and will support 300 or 1200 baud. In the next newsletter we will outline the program, accessing it, and the types of files included in it.

The Front Cover— was created on my QX-10 and FX-100, using a new graphics software program called QPLOTTER. There is a review of this exciting program in this issue.

HELP WANTED— We are looking for individuals to help us review new products in areas of: accounting, word processing, data base management, medical records, telecommunications, and hardware aspects. We will supply qualified individuals with the products for testing and review. We require a resume' listing your experience and qualifications for the product area you would be willing to review, and a sample of your writing style. Local users groups may want to consider this activity.

Inflation hits! The cost of producing a quality newsletter with as much information as we have been bringing you, necessitates our increasing the subscription rate to \$15.00. Never fear, if you have already subscribed, there will be no increase until renewal time.

A last note, I will be attending the Comdex show in Las Vegas at the end of November and will be bringing back exciting product news to share in January. Have a nice holiday season and a happy new computing year!

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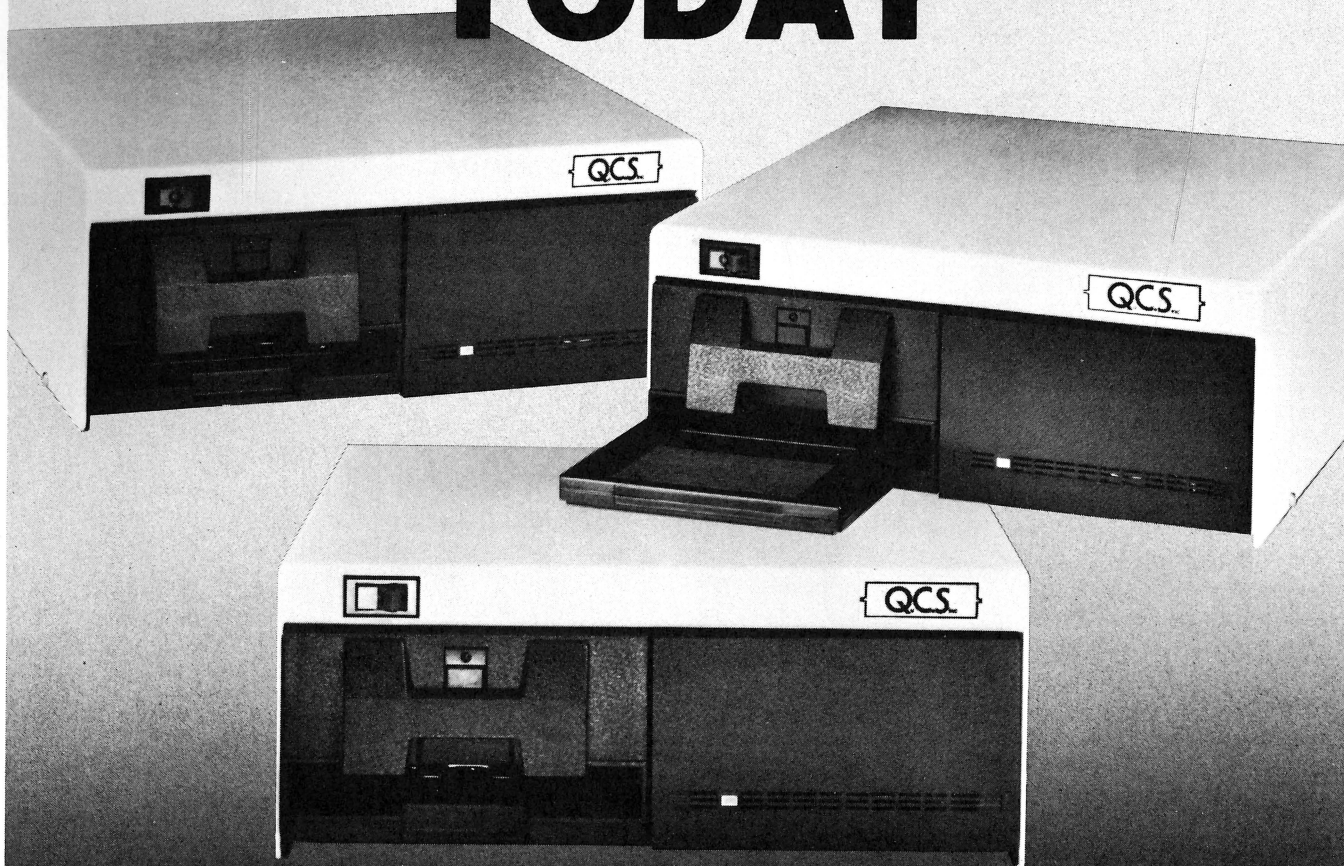
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Data Base Management— What is it all about?

A data base management system is a systematic method of storing, retrieving, and updating information. The information is entered as a whole file, or item by item. In a data base management system (DBMS), you can input information, select and sort it, process it, and produce a variety of reports. A good system design lets you decide how to use the information you input. Let your imagination go and you can create endless uses: inventory, mailing lists, library index, calendar of activities, resource file, medication chart, patient file, catalogue of your record collection, classifications of dragons, etc. There are DBMS programs for both the QX-10 and the HX-20.

How does DBMS work?

First, organize your input data, then decide how much information you want to store, and what types of data to enter. This information becomes a standard form you use each time you enter information for that file. Enter the data.

A data base management program is like a large filing cabinet, with elves inside. The elves spend their time running around and organizing or copying the data into every different file folder they can cross reference the information with. Of course, in this instance, we let the computer do the running, and we tell it various ways to cross index the information. The main point is that you can retrieve the information in a whole variety of ways, without having to input the data more than once.

There are specialized DBMS software programs. The writers in our users group may be interested in a DBMS that is helpful in cataloging and creating bibliographies—for example, Data Writer by Software Options, or Quick Search Librarian from Interactive Microware.

Data base programs already available for the QX-10 are: dBase II, Ashton Tate; Perfect Filer, Perfect Software; Personal Pearl, Relational Sys-

tems; Condor I, II, and III, Condor Computer Corp.; Infostar, Micropro International; Analyst and Qsort, Structured Systems Group; and Query I, Hoyle & Hoyle. A data base program for the HX-20 is Database Management by Brian Lomasky.

These are by no means the only programs available. One of the biggest decisions we face about software is which one to choose. *BYTE* magazine, May 1983, reviewed five of the main DBMS programs. The following programs were compared: Selector V, Micro-Ap, Inc.; dBase II, Ashton Tate; FMS-80, Systems Plus; Condor III, Condor Computer Corporation; and Analyst and Qsort, Structured Systems Group. All of these programs are available for CP/M systems. The conclusion of Jack Abbot, author of the article, was to prefer Condor for accounting ap-

plications and dBase II for other applications. Neither of these programs is menu driven, and users of the Epson who appreciate the prompt menus, may want to seek out demonstrations of various systems before selecting one. One thing to check out about any product, is that someone is available to answer questions, either a technical support phone line, a knowledgeable dealer or friend. Read through parts of the documentation and see how understandable and helpful the manual seems to be. One important consideration must always be whether the program will run on your computer, or can be downloaded to work with it. We will be reviewing some of these programs in future issues, and would welcome hearing from anyone using a data base management program with their Epson computer.

Attention!

PLEASE NOTE:

CORRECTIONS TO THE GRAPHICS PROGRAM PUBLISHED IN THE SEPT/OCT 1983 ISSUE—

We apologize for the typos that crept into the program listing, making things difficult and frustrating.

Line 144 has a =) which should have been =0. The remaining problem was with the divides (slash marks). Microsoft BASIC has two kinds of divide operations. A real divide is denoted with the customary "/", and an integer divide is denoted with a "\ (back slash). In lines 1030, 1050, 1330, and 1360, a front slash "/" was printed instead of the correct back slash "\ in-

teger divide mark. In addition to incurring a time penalty, the real divide also has different round-off characteristics, so that putting integer divides in these lines will make the program work as intended. In this program we communicated directly with the Graphics Display Controller (GDC) chip in the Epson hardware with multitudes of BASIC OUT statements. In the OUT statement, the port address is the first number in the statement, in our case &H38 and &H39. This number is defined by the hardware documentation. The second number is the data to send to that port address, and is always eight bits wide. Wherever we use a constant value in these OUT statements, we use &H before a number to designate it is a hexadecimal constant. This is a convenient way to express an eight bit number.

USERS GROUPS

The following is a list of users groups throughout the country. Those marked with an * are ready to organize. The balance are currently operating.

CALIFORNIA:

Epson QX-10 SIG Users Group
Link Abit Corporation
3033 Science Park Road
San Diego, CA 92121
(Meets 2nd Tues. every month)
Call Doug Dickerson
619/223-9311 Evenings

FLORIDA:

- * William J. Cuantero
Computer Resources Center
1st Floor, Independent Square
One Independent Drive
Jacksonville, FL 32202
904/353-2724

ILLINOIS:

Chicago Area QX-10 Group
Dynamic Tire Systems, Inc.
P.O. Box 94994
Schaumburg, IL 60194
Call John Smith
312/759-2638

KANSAS:

- * Jerry Billinger
1935 Collins
Topeka, KS 66604

KENTUCKY:

- * Sandra Neat
Jefferson County of Economic Devlp.
1006 Fiscal Court Building
Louisville, KY 40202
Business— 502/581-5737
Residence— 502/459-8038
- * George Puckett, Jr.
The Computer Consulting Company
9802 Fern Creek Road
Louisville, KY 40291
Business— 502/239-2457
Residence— 502/239-7691
Compuserve 74365, 63

LOUISIANA:

- * Pat & Don Clement
5612 Bridget Street
Metairie, LA 70003
504/455-1551

MARYLAND:

- * Bruce & Diane Phinney
Laurel, Maryland 20707
301/498-7906
- * James F. Rauch
3013 Regina Dr., Suite B
Silver Spring, MD 20906
- * Charles T. Walker
Groff & Groff
Suite 1003, Montgomery Bldg.
4720 Montgomery Lane
Bethesda, MD 20814
Business— 301/657-2774
Residence— 301/871-1760

MICHIGAN:

- * Michael A. Franks
6161 Worthmore Ave.
Lansing, MI 48917
517/321-6942 (after 5:00)
- * Martis Typing Service
David & Martha Obmann
13 Midway Drive
Negawee, MI 49866
906/475-7127
- * S.E. Michigan Detroit Metro Area
P.O. Box 14027
Detroit, MI 48214
(1st Meeting Sun., Dec. 11, 2 pm)
Contact Carolyn McCarthy
313/822-0090

NORTH CAROLINA:

- * Dr. Robert Kusy
University of North Carolina
Building 210-H
Chapel Hill, NC 27514
919/966-4598

NEW JERSEY:

- * Richard Mik
32 Lombard Drive
West Caldwell, NJ 07006
201/575-6447 (Evenings or Weekends)

NEW MEXICO:

- * Chris Hilleary
Technical Marketing
11927 Menaul N.E.
Albuquerque, NM 87112
505/298-6893

NEW YORK:

Epson Club of New York
306 West 100th St., Apt. 42
New York, NY 10025
212/222-3204 (Answ. Machine)
Compuserve address + 71515,306

- * Bill Flynn
444 East 77th St., No. 2B
New York, NY 10021

- * Jeanne Gardner
Harrisman Road
Irvington, NY 10533
914/591-7160

OHIO:

- * Thomas R. Cuthbert, Sr.
18730 E. River Road
Columbia Station, OH 44028
216/236-8567
- * Bob Foran
P.O. Box 422
Canfield, OH 44406
216/533-3985
- * Hal Posey
2638 Susann Ave.
Grove City, OH 43123
Business— 614/236-4161
Residence— 614/875-3236 (After 6 pm)

PENNSYLVANIA:

- * R. Shannon
Meadville, PA 16335
814/336-2223
- * Roxanne Toser
4019 Green St.
Harrisburg, PA 17110
717/238-1936
- * David Thomas
1324 Kerwood Lane
Downingtown, PA 19335

TEXAS:

- * Byteland Computers, Inc.
943 N. Expressway, Suite 20
Brownsville, TX 78520

VIRGINIA:

Central Virginia CP/M Users Group
c/o Wayne Olive
P.O. Box 422
Standardsville, VA 22973
804/985-3611

- * Don Terp
5140 Appletree Drive
Roanoke, VA 24019
703/342-9599

WASHINGTON D.C.

Washington D.C. QX-10 Users Group
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Final Word

By Dan Rourke Part I

Program: The **FinalWord**

Authors: Mark of the Unicorn
(Jason Linhart)
222 Third Street
Cambridge, MA 02142
(617) 576-2760

Function: A word-processing system consisting of a text editor and a text formatter and supporting programs.

Audience: Persons needing word-processing ranging from the very simple (a one-page letter) to the very complex (a technical book).

You are probably wondering, "Since the Epson QX-10 has **Valdocs**, why is a review of another word-processing program appearing here?" Some of our readers own the version of the QX-10 which does not have enough memory for **Valdocs** and **FinalWord** can do a few things which **Valdocs** can't (for example, compile an index and table of contents).

The Design of FinalWord

FinalWord consists of three programs: a text editor (FW.COM), a text formatter (FWF.COM), and a printing program (FWP.COM). In addition, there are two support programs (RECOVER.COM and CONFIG.COM), and two files describing the configuration of your system to **FinalWord** (CONFIG.DAT and ACTIONS.DEF). These programs run under the CP/M operating system described in our first issue.

Before describing how the three **FinalWord** programs work together, I should mention that the system can be used in three ways (the **FinalWord** manual does not make this as clear as it could):

- (1) simply as a text or program editor (FW.COM by itself);
- (2) as a "what you see is what you get" word-processing system (FW.COM and FWP.COM); and,
- (3) as a text formatter which produces very "polished" printed output (FW.COM, FWF.COM, and FWP.COM).

A "text-formatter" takes free-form, unformatted text containing control information describing how to rearrange the text and produces printed output which is formatted according to the control information. Usually, the printed output produced by a text-formatter looks better than that produced by "what you see is what you get" word processor.

FW.COM, the text editor, is the gateway to **FinalWord**. This is a very powerful editor with a large number of features usually found only on "what you see is what you get" printed word processing programs. You would use FW.COM to prepare the text you ultimately wish to print. From FW.COM you can get directly to the printing program FWP.COM, if you wish to use **FinalWord** as a "what you see is what you get" word processor, or to the formatting program FWF.COM, if you want to use the advanced formatting capabilities. If you intend to use **FinalWord** only as a program or text editor, then FWF.COM, the formatter, and FWP.COM, the printer, would not even have to be present on your **FinalWord** disk.

RECOVER.COM creates the "swap" file holding the most recent versions of whatever you have been working on. It also "recovers" as much text as possible from the swap file in the event of a disaster such as a power failure. I'll have more to say about the swap file later.

CONFIG.COM is used to change the "appearance" of **FinalWord** to you and your computer. As we will see, **FinalWord** has a lot of built in functions and operations which do things to the text and manuscripts you write. Most of these functions and operations are associated with single key strokes and sequences of up to three key strokes. Among many other things, the associations between keys and actions are contained in the file CONFIG.DAT. CONFIG.COM (and its companion, CONFIG.OVR) are used to "edit" CONFIG.DAT, and thereby change the way **FinalWord** looks to you. If the keyboard you use has function keys (as does the Epson), then these keys can be associated with actions. For example,

three keystrokes are normally required to justify a paragraph (Ctrl/X-L-J), but the action of justifying a paragraph can be associated with a single stroke of one of your function keys. The program CONFIG.COM is used to do this.

In addition to associating keys to actions, CONFIG.DAT contains a "description" of your keyboard and display, and what sorts of things they can do; a description of the kind of printer you use to obtain your printed output; and some default editing and formatting settings.

The Text Editor (FW.COM)

The **FinalWord** editor, FW.COM, is a full-screen text editor with a very extensive array of functions. Before discussing what these are and how to use them, a few words ought to be spent describing what **FinalWord** edits.

At any given time, the **FinalWord** editor is showing you the contents of one or two named **buffers** of text. These buffers acquire their names either from the first part of the name of the file being edited or explicitly as a result of you providing one. The buffers are contained in the "swap" file, FW.SWP. This file is automatically maintained by the system and any editing changes made to the text in a buffer are periodically written to the swap file. The period is quite frequent; after a few seconds of inactivity at the keyboard, the swap file is automatically updated. It is almost impossible to lose any text due to a machine or power failure. The program RECOVER.COM literally "recovers" the "lost" text from the swap file. The user must explicitly SAVE or WRITE the contents of the buffer being edited to the file corresponding to the buffer.

FinalWord will allow you to switch back and forth among several buffers. A larger swap file allows more but smaller buffers or fewer and larger ones. The limit on the size of a file which **FinalWord** can edit is somewhat less than the size of the swap file. My swap file is over 100K characters in

length and presently contains a 30 page paper in addition to this manuscript.

FinalWord will allow you to look into one or two buffers through either one or two **windows**. When first started one window is active, but a command will split the screen into two windows. The windows may be into different parts of one buffer or into two different buffers. This is a very, very nice feature and is available on only a few editors. (EDIX and PerfectWriter are two of which I'm aware.) The size of the windows is also adjustable; one of them may be made larger and the other correspondingly smaller.

The **FinalWord** display uses all 25 lines of the screen. The bottom two lines are used for status information and the text being edited appears in the top 23 lines. If two windows are active, a reverse video line of "-" appears in the center of the screen splitting the text into two sections of 11 lines each.

With one exception, **FinalWord** does not insert any strange eight-bit characters into the file being edited. Consequently, the editor is a pretty good program editor and can be used to edit Basic, Pascal, dBASE II, or any other type of program. The **FinalWord** editor can accommodate lines up to 127 characters in length. The ability to edit and display lines longer than 80 characters is important for an editor used on programs.

The one exception mentioned above is that **FinalWord** allows you to **highlight** text which can be displayed as either underlined, intensified, or in "reverse video" on the CRT and printed as underlined, bold, italics, or whatever your printer can do to emphasize text. The high-order bit of the characters in highlighted text is forced to "on" rather than its normal "off" state. Highlighted text is most useful when **FinalWord** is being used as a "what you see ..." word processor.

The user invokes the editing functions of **FinalWord** by any or all of several means:

- (a) Control-letter keys (usually for simple editing functions);
- (b) A control-letter key followed by two other key strokes (for more complex functions);
- (c) Cursor movement keys and scrolling keys on the function keypad and other "function" keys.

Almost none of the editing functions are "hardwired" to particular keys, although the keys/functions under (a) and (b) tend not to be changed. You may want to change the key-to-function associations under (c), however. The program CONFIG.COM makes it very easy to do this.

The following table shows the editing functions which are obtained from the control-letter keys. This table will give you a feel for the "simple" editing functions.

Ctrl/Letter Key Definitions for **FinalWord**

Key	Function	Description	Key	Function	Description
A	<u>A</u> gain	Repeats the previous command	N	s <u>e</u> Ntence object	Move or delete by sentences
B	<u>B</u> uffer object	Move or delete by buffers	O	<u>O</u> pen line	Insert a new line; leave cursor <u>in front of</u> inserted line
C	<u>C</u> haracter object	Move or delete by characters	P	<u>P</u> aragraph object	Move or delete by paragraphs
D	<u>D</u> elete forward	Delete text forward from the cursor to the end of the next object	Q	<u>Q</u> uote next character	Use to insert special character; e.g., control characters
E	<u>E</u> dge of line object	Move or delete to the edge of the line	R	<u>R</u> everse	Move or delete in the reverse direction
F	<u>F</u> orward	Move or delete in the forward direction	S	<u>S</u> earch	Search for character string
G	<u>G</u> o-again or <u>a</u> rgument	Repeat next command or specify numeric argument	T	<u>T</u> ranspose characters	Transpose the two characters before the cursor
H	<u>d</u> elete char. backwards	Same as Del and <—	U	<u>U</u> ncase word	Change case of current or previous word
I	<u>I</u> ab	Inserts a tab; same as Tab	V	screen <u>V</u> iew object	Scroll by screens of text
J	<u>n</u> ewline and <u>i</u> ndent	Inserts a newline and indents it the same as the previous line	W	<u>W</u> ord object	Move or delete by words
K	<u>K</u> ill reverse	Delete text backwards from cursor to the end of the next object	X	e <u>x</u> tended command menus	Display Extended Command menus
L	<u>L</u> ine object	Move or delete by lines of text	Y	<u>Y</u> ank screen object	Scroll by one-fifth of a screen
M	<u>i</u> nsert newline	Same as Return	Z	<u>Z</u> ap	"Zaps" you out of whatever mess you've gotten yourself into

QUESTIONS & ANSWERS

Q— My FX-80 printer has a 2K input buffer stage, however, as it came from the factory, the buffer was switched off with the DIP switches. Would it be to my advantage to use this buffer? J.D. McCoullough, Jr.

A— It is usually to your advantage to use the input buffer on your printer. If the number of characters in the document you are printing is less than or equal to the size of your buffer it is advantageous to use it. It will look as though the printing is being done almost instantly, and you will have exclusive use of Valdocs immediately, without sharing it with your print spooler. When your document is longer than 2K or the size of your input buffer, the first 2K of characters will appear to print almost instantly, then the characters in the document beyond that will appear to print at a rate equal to 160 CPS without any print buffer. The only disadvantage we can think of, is that if you discover you really didn't want to print the document, then you will have to turn off the printer in order to stop it. If you have sent special control codes to the printer, for example, 17 characters per inch, then all these effects will be lost when the printer is turned off and back on.

Q— I have made repeated attempts to connect with the Dow Jones Connector, utilizing my Hayes Smartmodem, before anyone told me that a separate telecommunications package was required. Wasn't that supposed to be one of the original benefits of the integrated Valdocs mail function? G. Schwarzbart

A— The fault lies not with the Epson, but with Dow Jones. To perhaps maximize their control over the system and income, you have to buy both their terminal program, and access to their service. Some of these services are available through other networks like the Source and Compuserve.

Q— It is my understanding that Valdocs is written in Stoic, or some derivative of Forth. Is this true? A. Bell, Parsippany NJ

A— The Valdocs editor was written in Stoic, and the index and scheduler in "C". Future versions may be written in Forth, or in a modified Forth language.

Q— I have a problem with Final Word, by Mark of the Unicorn. I cannot get it to print a document more than nine pages long in the advanced printing mode. I find it an excellent program, unique in its ability to handle specialized tasks, automatic chapter numbering, indexing, footnoting, table of contents, etc. But I find it easier to use Valdocs to process letters. I have expanded the "swap file" to 96 pages. I use a data disk to keep my system disk with the F.W. free and clear. But I fear the print file cannot handle a document larger than 9 pages. Can you help?

A— There may not be enough disk space to write the intermediate files that are passed from the formatter [FWF.Com] to the printer [FWP.Com]. Run stat on the disk that is the log disk when you run Final Word and see how much extra space you have.

Q— Is there a way to enable a bilingual keyboard (English, French)? The RX-80 printer has the codes. Is there a way to achieve access to these codes by a single keystroke? E. Thyssen, Tampa FL

A— We will look into this, we do not have a ready answer. *Perhaps a fellow user will help* ****

Q— How can I get more information on programming in Microsoft Basic, and how is it different from other forms of Basic? L Goin, Nashville, TN

A— Go to a local bookstore like B. Dalton, and check in their computer book section. You should find lots of books on basic. See our "Bookstore" section in the last issue for some suggested titles. Standard basic on most 8080 and Z80 based microcomputers is Microsoft basic. Digital Research sells a basic compiler called C Basic that does essentially the same type of things, but looks a little different. There are other versions of Basic for other computers, like the Texas Instrument, etc. and there are differences in the basic programs, for example, how files are named. Microsoft Basic will let you set up fields within files and let you have a multiplicity of files that you might not find in other versions of Basic.

Q— Presently, I am using the QX modem program to communicate with our corporate VAX system. This treats me like a dumb terminal. If someone knows how to do it better, please help! Dr. M. Jaffe, Huntingdon Valley, PA

A— You need a terminal emulator program to emulate a VT52 or VT100 system. To the best of our knowledge, one has not been written for the QX-10. There may be a program for CP/M that is general enough that it could be tailored to your computer. *Perhaps a fellow user can assist.* ****

Q— Is there a way to send FX-80 control codes directly from Valdocs? I started by keeping a copy of MBASIC on my data disk in order to send the codes through "Iprint", but this is a bit clumsy. I am now using a modification of CP/M utility, published in the April 1983 issue of *Microcomputing*, to send the control codes I usually need. This is still not as convenient as I would like. M Delany, Laurel, MD

A— The Epson control codes usually begin with escape Hex 1B. They also consist of other ASCII hexadecimal control codes (small integers ranging from 0 to 31). 32 is the numeric value for a blank. Almost all of the characters with values 32 and greater (up to 176) are considered printable. Valdocs uses characters with values less than 32 to mean special things, and the keyboard routine in Valdocs does not let you enter any of these codes directly into a Valdocs file. The method you are using, a small program to send these FX-80 codes to your printer, is one way of achieving your result. Another way is to have small files containing these printer control codes, and to use the merge feature of Valdocs to include these files in a Valdocs document. For print controls of italics and bold, it is easiest to use the special keyboard typestyle keys. To go into condensed and other modes, you will need to use your basic program, or merge a special file into the one you are working on.

A fellow user is looking for an APL interpreter for his QX-10. The Vanguard Systems Company at 6712 San Pedro Avenue, San Antonio TX 78216, is no longer marketing their Z80 based software. Help is desired.

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Our complete bar coding system is more affordable than many systems with less computer power. It gives you unmatched accuracy and reliability to make inventory control and other data collection easier and faster than you ever dreamed possible, regardless of what kind of business you're in. This new system works perfectly in retail stores, warehouses, hospitals, libraries, publishing firms, military installations, shipping and handling departments, manufacturing plants, and even blood banks. If you need to keep up with materials, information, or people, it'll work perfectly in your business, too.

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High-quality bar code symbols printed by an Epson FX-80 printer that's driven by the HX-20.

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After the BASIC programmer has designed the application to meet your specific needs, it takes only minutes to learn how to become a proficient scanner. Just plug the IS Wand into your Epson HX-20 Notebook Computer and pass the wand over the bar code. The wand instantly reads and records the information stored on the code to eliminate the tedious job of recording the information by hand. Plus, you get up-to-the-minute data any time you need it to help you make better decisions faster.

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The Wand on our system reads from 3 to 30 inches of bar code per second to give you unmatched speed and accuracy

Keyboard entry results in a human error every few hundred keystrokes, even with the most efficient operator. Bar code entry reduces mistakes to one error for every few million scans!

COMPLETELY PORTABLE.

Our system is so light and compact it's easy to take anywhere — the warehouse, a branch office, your other store, or even out of town. Your HX-20 computer is powerful enough to run on its internal power supply for over 50 hours and recharge in less than eight. Plus, you can use it all day, shut the unit off, and the computer will "remember" every bit of information you fed into it.

A REAL BARGAIN.

The IS bar coding system is a good buy any way you look at it. Here's what you get for your money:

- A powerful briefcase computer
- A high resolution dot matrix printer
- A first-time read rate that exceeds 90%
- Increased productivity
- Improved efficiency
- Lower operating costs

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IS bar code utilities read and print the five most popular symbologies: Code 3-of-9, UPC, Plessey, Codabar, and Interleaved 2-of-5.

Ask your Epson dealer to show you the IS bar coding system in action. He'll be happy to show you exactly what our system — or any part of it — can do for you. Regardless of which you choose — the whole system or just the software — you'll be glad you picked IS. It's the best.

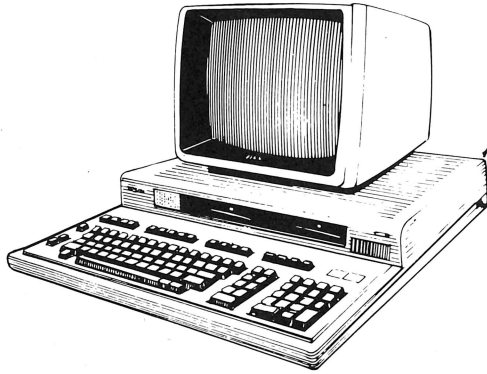


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QX & HX, Just A Handshake Away

by Doug Porath, MCS



Although Epson's HX-20 and QX-10 use different microprocessors and operating systems, all is not lost. Since both computers use ASCII coding for text, information can be passed between the machines in a very straight forward manner. However, depending on what and how information is to be transferred, things can get progressively more complex. I will now attempt to describe this progression.

Communications using Valdocs "Mail" and the SmarTerminal II program for the HX-20

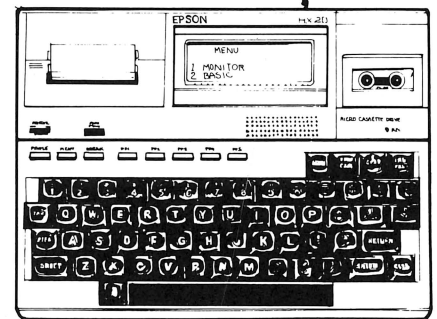
The simplest method for transferring information between the QX-10 and the HX-20 utilizes the "MAIL" function of Valdocs and the Christensen Protocol transfer option of the SmarTerminal II program. To send a text file, or any file for that matter, to the QX-10 from the HX-20; the QX-10 must first be in the initial "MAIL" MENU with a Comrex CR-103 or Hayes Smartmodem attached to a dedicated phone line. The information to be sent should already be in the SmarTerminal II buffer. A call can then be placed to the QX-10's number from a phone capable of being attached to the HX-20's modem. When the modem attached to the HX-20 indicates that a carrier is present, the Send Christensen Protocol option should be activated. Within 20 seconds the message "00001=RECORD#" should appear on the HX-20's display, and the number should increase by one about every 5 seconds (at 300 baud). This indicates that a 128 character record is currently being sent from the SmarTerminal II

buffer to the QX-10. If the number does not increment, then there is a problem with the phone connection. Ten tries will be made for each record, and if the phone connection is poor, the transfer will be aborted. When the transfer is complete, SmarTerminal II will return to the terminal mode and the QX-10 will automatically terminate the call (the HX-20's modem carrier will be lost). At this point, Valdocs will show an entry in the "IN BASKET" that can be saved to disk as either an indexed or non-indexed file.

Transfers to the HX-20 are nearly as simple. A call is placed from Valdocs "MAIL" to a phone number that is attached to the HX/modem combination. The call can be placed either through Valdocs "Person-to-Person" or "Send-a-File", and the SmarTerminal II receive Christensen Protocol option should be enacted when the call is connected. If "Person-to-Person" is used, UNDO must be pressed after the connection is made in order to get to the blocked, Christensen Protocol, send option. There should be at least three failed attempts to send record No. 1, because Valdocs attempts to send a #0 record three times (it contains sender information) that the SmarTerminal II program cannot receive. The fourth apparent attempt, according to the HX-20's display, will actually be the first attempt for the transfer of record number one.

There are some limitations in Valdocs "MAIL" that precludes use in some applications. Briefly, the limitations are: A Hayes Smartmodem or Comrex CR-103 is required (dumb modems cannot be used); currently, a data format of 8 data bits with no parity

is fixed; and non-blocked information transfers cannot be saved to disk. Programs other than Valdocs are available to provide alternate methods of transferring information. Modem 7 is an example of one of these, it allows the capture and storage to disk of information received in a non-blocked manner. Using the CP/M "SETUP" program, Modem 7, can also be used for data formats other than 8 data bits without parity. Any RS-232 modem can also then be used. Once the program is RUN, the terminal mode can be entered with "T FILENAME.EXT", which opens the disk file "FILENAME.EXT". Once this is entered, CTRL Y (noted ^Y) opens the input buffer to incoming information that can ultimately be saved to



disk. CTRL W (noted ^W) turns off input to the buffer. When interaction is complete, CTRL E (noted ^E) returns the program to the command mode. From the command mode, "WRT" will store the received information in the buffer to disk. Modem 7 can also be used for blocked (Christensen Protocol) transfers using direct connection or connection through modems. This can be used to connect the HX-20 directly to the QX-10, using the Epson 715 cable. The "SEND" or "RECEIVE" option in Modem 7 can be enabled to allow files to be transferred to or from the HX-20 (directly connected) without the use of modems. Modem 7 is quite frequently used to "download" programs from other CP/M computers to the QX-10. About the only thing to remember when using Modem 7 is that the baud rate and data format of both computers should be set the same. From the command mode, "S FILENAME.EXT" (or "R FILENAME.EXT") will send or

receive the file "FILENAME.EXT" using a blocked (Christensen Protocol), checksum transfer. Most bulletin boards have a program called XMODEM which is essentially Modem 7 operated by the other computer to be involved in the file transfer. Using SmarTerminal II, XMODEM can be ordered to send or receive (the commands are the same as in Modem 7) and then the receive or send Christensen Protocol option can be engaged in the SmarTerminal II program.

One Step Beyond

Obviously, communications to other than QX-10's or HX-20's will be prevalent. For general communications, I know of no other program, other than SmarTerminal II that can be used reliably on the HX-20 for this purpose. For most cases, such as Compuserve or the Source, the "MAIL" function of Valdocs will be adequate. For hard copy, the PRINT key can be pressed.

However, "MAIL" is capable of 8 bit, no parity data format, file transfers using Christensen Protocol, and external connection through a Smartmodem only. In other cases, Modem 7, run under CP/M, is an excellent choice for use with the QX-10. When this is done, the data format should be adjusted under the "SETUP" program in CP/M before Modem 7 is run.

Modem 7 and SmarTerminal II

Modem 7 is a very versatile communications program that was originally written by Ward Christensen. This program was designated to be public domain by the author—meaning that it is free for the copying. Every QX-10 dealer should have a copy of it and should be willing to copy it onto any of their customers disks. I would recommend that all QX-10 owners engaged in tele-communications have a copy.

SmarTerminal II for the HX-20 is copyrighted and has a list price of \$59.95. It should be available through all HX-20 outlets, although many may not stock it. Some of the available options included in the SmarTerminal II program are: 7 or 8 bit data with or without parity; 300 or 1200 baud, although the program can be modified for others; unbuffered display; without display to allow large transfers without handshaking or the resulting data loss; user definable buffer ranging from 80 to 26,000 characters dependent on available memory; non-volatile buffer, even after exiting the program; X-on/X-off handshaking; load and save from and to microcassette; print to full size of microprinter; mini-text editor for word processing; and 140 character logon message buffer for quick and easy system logon. If there is a problem locating a copy, contact the Epson distributor in your area.

NOTICE TO QX-10 USERS

*by Dr. Kusy
Chapel Hill, NC*

There have been some people who would like to use the "alpha" symbol from the graphics keyboard but have found that it is inoperative. Well, you can print this symbol if you are willing to put up with a little hassle. Here's how to do it:

Type as you would normally do until you arrive at the "alpha" symbol. Now press the italic typestyle key, a space, the italic typestyle key, and a space once again. The result will be a blank on the screen of your CRT, but an "alpha" when you print-out your document. The keying sequence is very important here, or else you can get more "alphas" than you bargained for—in the free spaces, in the margins, etc.

Good luck with this elusive Greek!

"Required Reading."

Learn how to use VALDOCS and the EPSON QX-10 in a fun and easy-to-read way.

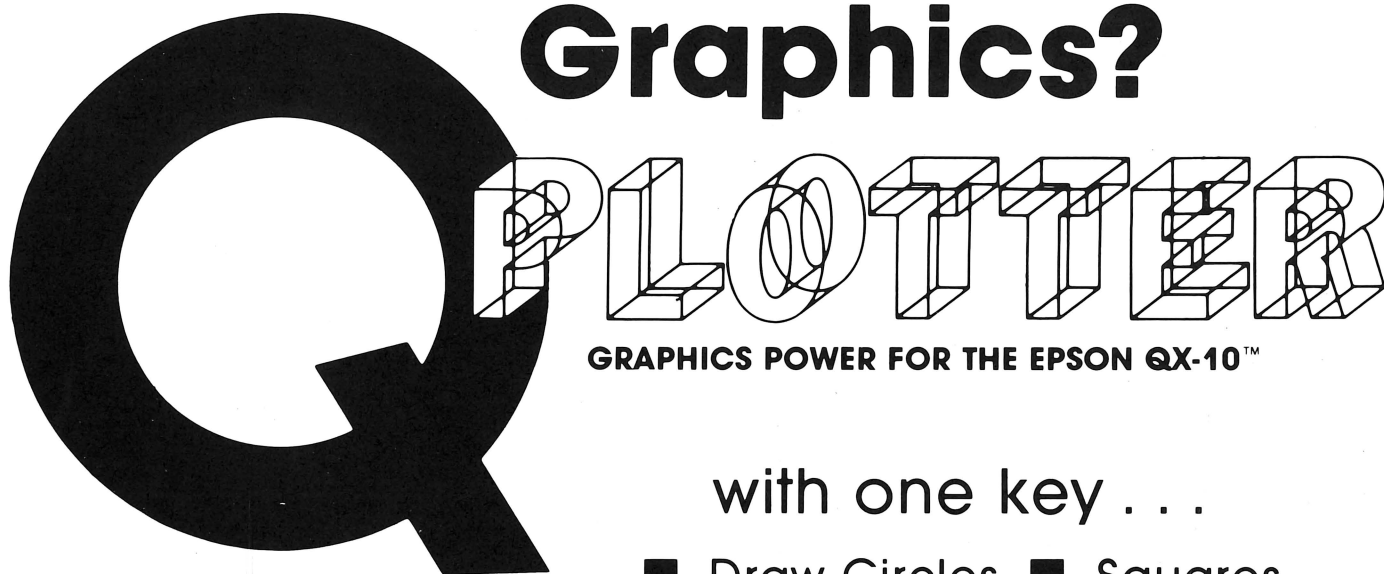
THE QX-10 BOOK
VERSION 1.18
VALDOCS

A unique new approach to learning how to use a computer! Also includes: Printer Interfacing, CP/M, Telecommunications, a computer dictionary, and over 10 pages of phone numbers your computer can call!

Suggested retail \$15.95

Contact your local bookseller, computer/software dealer, or send \$15.95 plus \$2.50 shipping and handling to:
The Barlan Company, 12021 Wilshire Blvd., Suite 148, Los Angeles, CA 90025, (213) 474-4952.
M.C. & VISA accepted by phone order only. Calif. residents add 6.5% Sales Tax. Dealers: contact SoftTeam (213) 204-6620, or Micromedia (800) 423-4265, or California dealers call Amber West (213) 320-4858.

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SOFTWARE Review

QX-10 GRAPHICS SOFTWARE

Q PLOTTER is an exciting graphics package for use with the QX-10 computer. There are two modes of use, Direct and Program mode. The direct mode helps you learn how to draw just about anything, as seen on the front cover of this issue. The instructions are well written and easy to follow. The Qplotter disk is placed in the "B" drive and used with the Valdocs system disk in "A". Qdirect starts up in screen 1 (there are four screens). There is a command line across the bottom of the screen with options for cursor motion, cursor position within a X and Y plane, overlay options and drawing options. One of the nice features of this program is that it has been written to interface with the HASCI keyboard. The cursor arrow keys and application keys (draw, undo, print,

bold, italics, store, menu and retrieve) are all active with the program. To store a picture, press the STORE key. SIZE is used to increase the size of characters from 1 to 16, and STYLE decreases the size from 16 to 1. Command line options let you decide what shape you wish to draw: A-arcs, C-circles, D-diamonds, E-erase, F-flash on/off, L-lines, M-move window, O-overlay, P-parallelogram, R-rectangles, S-sketch, T-triangles, V-vector pattern, W-write characters, X-draw axis, Z-zoom. The command line provides the means to designate the size radius of a circle, the base and height for other figures, and also lets you have any figure shaded in with any of the 16 patterns provided. Figures can be overlaid in four different ways: overstrike, inverted, blank out, and add to.

The demo program produced by Metro Software demonstrates some of the amazing things your can do. Anima-

tion effects can be produced by drawing almost similar pictures in the four different screens, and having them run through quickly. This animation is similar to the animated picture books where you flip the pages quickly and the figure appears to be moving. The Qprogram mode lets you program in Microsoft Basic and use all the call routines for the graphics available in Qdirect mode. It is possible to compile your program and run in interpretive mode with MBasic Compiler. Metro Software will be interfacing a light pen, mouse, and joystick with their graphics in the near future. The program will be available through dealers, and from Metro Software, Inc., 5648 East Broadway, Tucson, AZ 85711. The following number has been set up to accept orders, 1-800-824-7888 Operator 409. For technical support and other questions call 1-602-747-0005.

New Product Announcement



ACORN Publishing Introduces a complete line of Entertainment and Educational software utilizing the "NEC" graphic capabilities of the QX-10.

- Arcade quality entertainment
- 20+ level tutorial programs
- For use with CP/M and TPM-II

Please contact your local Epson dealer or contact **ACORN Publishing** P.O. Box 4008, San Pedro, CA 90731 or phone: (213) 519-7509

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HX-20 SOFTWARE

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DEALER INQUIRIES INVITED

POTPOURRI

QX-10 BULLETIN BOARDS

Ohio— 614 687-6413, Ralph Rue
 Missouri— 301 863-7165, St. Mary's
 College 300/1200 baud and hard
 disk.
 California— 213 957-5195, 300 baud.
 Georgia— 404 447-9218, ready soon
 300/1200 baud.
 Illinois— 618 997-3220, QHX, 300 baud.
 Pennsylvania— 215 788-3499, Paul
 Yarren with Mid-Atlantic Distribu-
 tors Bulletin Board.
 Michigan— 313 823-1425, in the works,
 should be available soon. The
 Epson Connection 300/1200 baud.

Correction: The number published in
 the Sept/Oct issue for the Long Island
 Bulletin Board, should read, 516 567-
 8267, 300 baud.

RUMORLINE

Epson America, Inc. has prototypes
 of 5 1/4 inch floppy disk drives for the
 HX-20. Called the TF-20, single sided,
 single density. We hope to see this in
 the future.

Valdocs 2.0 may include a com-
 pletely new editor written in their own
 version of Forth, called "Telos X".
 There will be subscript, superscript, mail-
 merge, integrated spreadsheet, relational
 database, multigraph, graphics and its
 own spelling proofreader program. A
 3-D cadcam business graphics package is
 in the future. How soon for 2.0? Any-
 where from now to April ??? We're
 still hoping it will include the ability to
 search for key words and indicate what
 pages they are on . . .

We may find some internal boards
 by Christmas for the QX-10.

How about levels 1 & 2 of Forth on
 a ROM chip for the HX-20!

BOOK REVIEW

The Official Computer Hater's Handbook

Mr. Arneson, author of the book, is a
 QX-10 owner and user, and has created a
 delightfully humorous book. The cap-
 tions, illustrations, and articles brought
 chips of chuckles. The book includes re-
 views of software programs such as
 CompuFear, "a program that predicts
 everything that will happen for months in
 advance", CompuDent and Compushrink.

The history of computers, and the
 growth of the industry under "American
 Telephone and Takeitall" and "Interna-
 tional Babbage Machines" is diligently
 documented.

There are phrases to turn on your
 hacker spouse, dictionary terms and il-
 lustrations of how to fix a computer.
 This is a thoroughly delightful book for
 yourself and family as well as friends that
 have to live with a Computer User.

The book, by D. J. Arneson, is a Dell
 paperback, and sells for \$3.95.

PRINTER INFO

Softcraft, 8726 S. Sepulveda Blvd.,
 Suite 1641, Los Angeles, CA 90045,
 (213) 821-8476. Fancy Font printer
 program— information and demonstra-
 tion disks are available. This program
 uses an Epson dot matrix printer and
 produces a whole variety of different
 printing fonts, including gothic, and can
 print in different sizes.

Does your comriter feed extra lines
 at the beginning of the page? Help is on
 its way. RSI has prepared a 1.18 Val-
 docs update for Epson America, Inc.
 which we should be seeing soon.

In the past issue we mentioned the
 need to indicate to the QX-10, that the
 CR-2 should be setup as (o)ther printer.
 This is also true for the CR-1.

Helpful hints— Line up continuous
 form feed paper in your printer with the
 perforation right at, or just a hair above
 the print head, NOT at the tear-off bar.
 This will keep your pages centered
 properly, and the page numbers on the
 right page.

YOUR CORNER

William Baber of Richmond, VA,
 sent us the following information on
How to list out the HELP file. First
 make sure the experience level in SETUP
 is NOVICE or higher. (See Valdocs
 Users Guide, pages 6-8 through 6-10).
 Next, use MENU to exit to TPM-II.
 When you see the A], press CTRL P.
 TPM, like CP/M, recognizes this as the
 printer switch. Now, entries from the
 keyboard and displays to the screen will
 also appear on the printer. Enter the
 command TYPE HELP.TXT. The
 screen will start displaying the help file
 contents, and the printer will produce
 about 17 pages of material for Valdocs
 Version 1.18, 16 pages for version 1.16,
 and about 5 pages for version 1.14.
 Much of the information repeats mater-
 ial from the manual, but some of it is
 new. All of the information is available
 through the HELP key during different
 modes of use. Once the printer stops,
 and the A] appears, press CTRL P to
 turn off the printer switch and enter
 RESTART to return to Valdocs. This
 procedure can be used to list any print-
 able file.

Dr. H. Gerald Oster recommends a
 Database system to use with your
 modem. Consider BRS After Dark. It
 is an excellent reference system for phy-
 sicians, psychologists, social workers
 and business executives. BRS (Biblio-
 graphic Retrieval Services), 1200 Route
 7, Latham, NY 12110, is accessed
 through Telnet, Tymnet and Uninet,
 their toll free number is 800 833-4707.

CORRECTION:

Please make note of the following
 correction to the Sept/Oct issue of our
 newsletter.

Lockheed— Georgia has incorpor-
 ated the HX-20 as a flight handbook for
 their C-130 planes. It will enable pilots
 to calculate takeoff and landing dis-
 tances, wind components and several
 other calculations, quickly.

Stable Technology's HX-FORTH Compiler.

HX-Forth cuts down on program development time, sometimes by a factor of ten! It encourages structured programming and is both interactive and modular.

It is based on the fig-FORTH language model; but the similarity ends there. HX-FORTH has been specifically designed to work on the Epson HX-20. It is a compiled, high-level language, an operating system, and a set of development tools rolled into one easy-to-use package.

HX-FORTH Is For Real-Time Applications.

HX-FORTH is the ideal choice for applications involving data communications, storage/retrieval, data acquisition, or when special-purpose hardware must be interfaced to the HX-20.

HX-FORTH is FAST, much faster than BASIC, and almost as fast as assembly language. For really time-critical routines, HX-FORTH has a built-in Assembler which links machine code to the high-level code.

HX-FORTH code is COMPACT. In fact, applications require LESS memory space than assembly language programs!

HX-FORTH Has Many Features

HX-Forth is different from other implementations of the FORTH language because it has been written specifically for the Epson HX-20, and because it includes a number of enhancements:

Array and Record Structured Variables help to organize data so that it can be conveniently stored and retrieved on the Microcassette in random fashion, using the File Manager Routines.

HX-FORTH Compiler which converts the high-level source code to fast, compact, run-time code. The code can be put into RAM, PROMs, tape or disk.

Floating Point Arithmetic, as well as 20-digit integer arithmetic for exacting computations. Floating point compares, float-to-ASCII, integer-to-float, etc.

Microcassette Control words allow the programmer to store and retrieve full "screens" on the tape drive in a random-access fashion, just as if it were a disk. Disk support is also available.

Source Code Editor using either the built-in screen, or an external "dumb" CRT terminal for full-screen editing.

Trace/Debug Mode single-steps thru definitions and traces the history of execution of a word.

How is HX-FORTH Distributed?

It is distributed in one or two 8K PROMs, which are installed in the HX-20.

Order your personal copy now for \$195

Volume Users and OEMs

Stable Technology can help customers get their application running. We will even write your program and design special-purpose hardware if necessary.

Turn your HX-20 into a data logger!

Now you can connect your Epson HX-20 to analog and digital signals, plus expand your system memory for just \$795.

Completely Portable

The ST-1 plugs into the expansion module connector, drawing its power from the HX-20's batteries.

This means you can use your HX-20 to log data and control industrial processes. Use it anywhere you need a low-cost, portable instrumentation system.

Its 12 analog inputs convert signals from sensors and other sources to digital form automatically, saving hours of work. The unit also has 2 event counters, six relay drivers, and 2 analog outputs

Easy To Program

It can be programmed in BASIC, HX-FORTH, or Assembly Language. It comes with example programs to get you started.

The ST-1 also has 14 K of CMOS RAM memory, and 2 sockets for PROMs. This gives your HX-20 a total of 30K of RAM.

HX-Forth is a Trademark of Stable Technology, Inc.

Get all the details by calling:

G. W. Smith Assoc.
62 N. Chapel Street
Newark DE 19711
(302) 738-7308

SOFTWARE HX-20

HX-20 SOFTWARE

Brian Lomasky, 984 Hanover Road Meriden, CT 06450, (203) 237-9272. Brian has the following software ready to use and documented.

FINANCE No. 1— a multipurpose calculator program that will calculate amortization for loans, compound interest, interest, and loan reduction.

INVENTORY CONTROL SYSTEM No. 1— handles up to 255 different inventory items, consisting of part number, description, quantity on hand, quantity on order, reorder point, and unit price. There are three report formats available.

CAI DATABASE— used to display and/or print various statements and questions the user then answers. It will handle up to 255 lines of up to 20 characters at one time. User friendly dialogue.

PATIENT ALERT DATABASE— This program will handle up to 26 patients at one time. The patient file contains the first and last name, miscellaneous descriptions, Dx, Rx and two alert messages.

REALTOR SYSTEM No. 1— This program allows the realtor to qualify a buyer, and figure various loan possibilities. Calculation of annual interest rate, loan term, principal amount and qualification percentage.

DATABASE MANAGEMENT SYSTEM No. 1— handles up to 165 different database entries. Each entry item consists of up to 5 columns of data. Four different report formats are available.

HX-20 ACCOUNTING PROGRAM

Superware Systems, 10005 Bodega Highway, Sebastopol, CA 95472, has an accounting package for the HX-20.

HX-20 HARDWARE/SOFTWARE

F. Russo ROM Service, 56 South Manor Dr., White Plains, NY 10603. Will burn ROM's for your HX-20. Several programs can be put on the same ROM chip depending on the length of the program.

POWER-BACK

Software Riches, Riverview Terrace, Irvington, NY 10533, (914) 591-6470. Power-Back restores power when your computer needs recharging and no electrical plug is readily available. It allows you to run the HX, or the CX-20 (acoustic coupler) for several hours using four AA batteries.

HX-20 LASER BAR CODE READER

Compunetics, Inc. 2500 Rochester Court, Troy, MI 48084, (313) 524-9010. This company will be marketing a laser bar code scanner for the HX-20. They use the Symbol Technologies LS-7000 hand held bar code scanner. Their package includes the HX-20, with ROM chip containing a decode algorithm and interface, with a rechargeable NiCd battery belt pack to power the laser gun. The laser scan will pick up the bar code from a distance of 1 to 8 inches. Interested parties contact Danny Ballas at the above address.

HX PORTABLE AUDITOR

Systems Network, Inc. 7215 S. Westnedge Ave., Kalamazoo, MI 49002. (616) 329-0088. With this program, you can enter check numbers, account numbers, amounts, and handle information needed for cash disbursement journals.

HX-FORTH

Stable Technologies, Inc. has developed Forth on PROMS for the HX-20. Level One is the basic Forth with facilities for producing RAM-based compiled programs on the HX. Level Two, extends the language with the addition of floating point arithmetic, 20 digit integer arithmetic, a data file management utility, support for structured data records and arrays, and an assembler for linking machine language subroutines to Forth. Also available is a Model ST-1 Analog/Digital Interface Module that plugs into the expansion connector. Pricing and ordering is done through G. W. Smith and Associates, 62 North Chapel Street, Newark, DE 19711 (302) 738-7308.

HX-20 SOFTWARE

The following list of HX-20 software is available from Software Riches, Riverview Terrace, Irvington, NY 10533, (914) 591-6470.

APPOINTMENT KEEPER 301— will keep track of your appointments as it prints out a calendar for any month of any year.

Like the appointment keeper, **COMPU-PLANNER** prints out a full size (8 1/2 x 11) calendar to a MX-80 printer.

ALPHABETIZER 303— capable of alphabetizing a list of names or items, using 3K Ram memory.

GALACTIC WAR— an arcade type game with moving graphics and two levels of play. You are the commander of a base on the planet Epson. Your mission is to destroy attacking ships before they destroy you.

PADDLE BALL 305— a fast moving graphics game, played on the LCD screen. The game becomes increasingly more difficult to play as your score increases.

BINGO 306— like the traditional game of bingo, the HX-20 prints out random cards for each player and the letter, number combinations needed to win.

RACER 307— The object of the game is to steer your racing car around curved roads avoiding obstacles in a fifty mile race. (This is all action graphics on the LCD screen.)

Dealers may obtain a special "12-pack" which comes with a display case and promotional materials. Contact Jason Rich at Software Riches.

A special note about Software Riches. The company was started this year by Jason Rich. Jason, the president of his company, is 16 years old and currently in the 11th grade. We would like to send Jason our sincere best wishes for what looks like a very exciting future.

Look for QX-10 software in our next issue.

User Suggestions

EASY WAY TO UTILIZE PEACHTREE SPELLING PROOFREADER

by H. Gerald Oster, M.D.
Bristol, PA

I have had the opportunity to use the new Valdoks 1.18 version in the last several days and read the documentation as well. There are some very nice features added.

Please be advised that the "Mail" application is still unable to log on to the Dow Jones Service and hangs up during the logon procedure as before. Other databases seem to pose no problems. I am using TYMNET to log on. No terminal identifier is requested, and no data from the QX 10 and Hayes Modem is transmitted to the "Enter Password" query.

I believe that there is also a much easier way to utilize the Peachtree Spelling Proofreader with the procedure as follows:

Insert the Valdoks and data disc as per usual. Look up the file to be checked under index and obtain the date and number of the document. (e.g. 9.23.83.001). Go back to the MENU file control and get the Directory of disc B. Translate the Valdoks date and number above to read per the directory number (83923001.val). This can be done without actually going into Menu and Directory. Remove Valdoks and boot Spell Checker with CP/M in drive A. Type "B:83923001.VAL" when asked for file to check. Proceed with Spell Check Program. When completed, remove SP from disc A and reboot Valdoks. Retrieve the file which now has the mismatched words to correct marked; make corrections and store and/or print corrected document.

This system apparently works without difficulty.

INSTRUCTIONS FOR USING ENVELOPE SETUP PROGRAM

by Michael G. Otto
San Francisco, CA 94109

ENTERING THE PROGRAM ON YOUR DATA DISK:

1. Press "MENU" key and execute MBASIC from the application menu.
2. Enter the program as listed and save under name "ENV".

EXECUTING THE PROGRAM TO RUN ENVELOPES:

3. To execute envelope setup, use "MENU" to execute MBASIC, and key in "env" when it asks for additional commands for MBASIC. Otherwise you can enter MBASIC, load "env", and then run it. The program will automatically return you to the editor.
4. You must have paper in the printer when you run "ENV" because it sends control characters to the printer, and if the printer is not ready, they will not be transmitted successfully. The printer will print "Envelope Setup Complete" in the new format when the program executes successfully.

5. Using the "MAIL" function, select the "Print Mailing Labels" option, and design your labels with 1 label per line, and 9 lines between labels. Press "STORE" to save this format.
6. Select the "Print Labels" option next, and use the "Single" option rather than the "All Names". This will allow you to feed the envelopes one by one.
7. Although the "ENV" program transmits a control code to disable the end of paper alarm, the printer must still sense that it is not empty. Therefore, you must load the envelope so that the print head is in the middle, from top to bottom, (on the line where the name is to appear), and then insert something to hold down the paper-end sensing switch behind the roller. This lets the printer know that it is loaded and ready to print.
8. At the completion of printing your envelopes, you must reset the printer to begin on column 1 in its regular typestyle. You do this by turning the power switch on the printer off, then on again. You will notice the printhead reset itself to the left-hand margin.
9. This program, MBASIC, and your ADDR files should all be on the same diskette, for most convenience.

```

10 * *****
20 * SET EPSON FX PRINTER TO PRINT ENVELOPES
30 *   Written by Michael Otto - 10/17/83
40 *   1870 Sacramento Street
50 *   San Francisco, CA 94109
60 *   (415) 474-6200
80 *
90 *   Program name "ENV"
100 *
110 * THIS PROGRAM SETS THE PRINTER TO BEGIN
120 * AT COLUMN 35 AND USE EXPANDED, CONDENSED,
130 * TYPE FOR BETTER CLARITY TO PRINT ENVELOPES
140 *
150 * Set Label format for 1-up labels with 9
160 * lines between labels.
170 * *****
180 *
190 LPRINT CHR$(27); "1"; CHR$(35)
200 LPRINT CHR$(27); "1"; CHR$(54)
210 LPRINT CHR$(27); "B"
220 LPRINT "Envelope Setup Complete"
230 LPRINT
240 SYSTEM
250 END

```

'Set left margin to 35
'Use enhanced, expanded chars
'Disable paper-end alarm

Envelope Setup Complete

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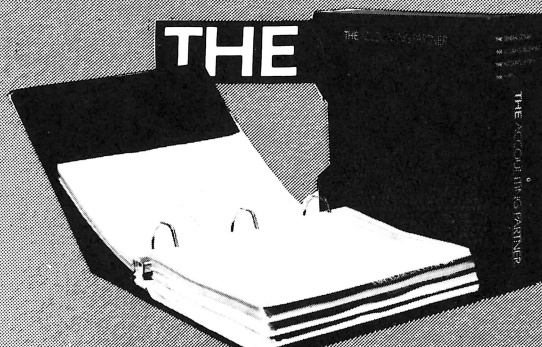
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Basic Notes About BASIC

The BASIC used in the Epson Qx-10 computer, is distributed with the CP/M disk. The file, named MBASIC.COM, on your CP+/CP/M disk is a pretty standard version of MICROSOFT BASIC created by the Microsoft Corp. It is invoked on the QX-10 by placing the CP/M disk in the A drive, and pressing the reset button located below drive B. Then type A> MBASIC and a carriage return [CR]. It is now in a command mode, and waits for you to input commands to tell it what to do. There are a few very basic commands you should try out to get a feel if this is your first time. You will see a title, with copyright date etc., followed by an OK. Type in FILES. This will give you a listing of all the files present on the disk. To leave MBASIC, just type SYSTEM, and you will be back to A>.

When in MBASIC, you can enter in program lines, by typing in a line number followed by various program information. MBASIC will also run any series of BASIC statements directly. We suggest you refer to the Microsoft Basic book for the Epson QX-10.

For most first-time users, it is sufficient to know how to enter and run programs such as the graphics programs which have appeared in this newsletter. Simply type in the programs as they appear. (Please note: there are corrections for the program that was published in Volume I No. 2). Watch your O's and 0's, and your 8's and B's. You can see what you have typed by entering the command LIST. Everything in BASIC is related to the line numbers in the program. The simplest way to change a program line is to simply retype it, it will automatically be replaced in the proper place with the new line. To save a program on your disk, type SAVE "file-

name",[A]. The filename is whatever name you call the program, which can be up to 8 letters and/or numbers (upper and lower case letters are distinct here). To later retrieve the program, type LOAD "filename" (don't forget the carriage return after these commands). To run the program, type RUN, and the program will run. Errors will be reported as, "type of error" as well as indicating which line number the error occurs in. Examine the line for the problem. Syntax Error indicates that there was a statement that was not an acceptable BASIC statement. RESET will close all open disk files and write the directory information to the disk. It is a good idea to do this before removing the disk. Refer to your BASIC book to learn how to MERGE and KILL files, as well as other useful commands. We leave more detailed descriptions to the manuals and instructors. This overview should help get you started.

User Suggestion

MBASIC PROGRAM

*by Charles R. Edwards
Schuyler, VA*

I am enclosing a short MBASIC program that I find useful in controlling the printer, especially with the PeachCalc spreadsheet. I do not know how to command the printer to the condensed mode while running PeachCalc, so I run my PRINTMOD program first to set the desired print size and then go to PeachCalc without resetting or turning off the printer. If you know an easier way to set up the print size please let me know.

```

10 'PRINT MODE SELECTION FOR EPSON FX-100
20 'File name is "PRINTMOD"
30 'Written by Charles R. Edwards, 8/26/83
40 PRINT "PRINT MODE SELECTION"
50 PRINT "using the ESCAPE ! codes (see p. 3-20, FX Operation Manual)"
60 PRINT "Some common modes:"
70 PRINT "  0 - Standard Pica size"
80 PRINT "  1 - Elite size"
90 PRINT "  4 - Condensed Elite"
100 PRINT "  8 - Enlarged Pica"
110 PRINT "or P - to print sample line"
120 PRINT "or E - to exit print mode select program"
130 K=-1 'Print mode undefined at this time
140 PRINT
150 INPUT "Enter a number between 0 and 63, or P, or E and press RETURN ",K$
160 IF K$="E" OR K$="e" THEN 300
170 IF K$="P" OR K$="p" THEN 250
180 IF VAL(K$)<0 OR VAL(K$)>63 THEN 190 ELSE 210
190 PRINT "ILLEGAL ENTRY"
200 GOTO 140
210 K=VAL(K$)
220 LPRINT CHR$(27);"!";CHR$(K)
230 PRINT "Print mode is now "K
240 GOTO 140
250 IF K=-1 THEN 280
260 LPRINT "This is a sample of print mode number "K
270 GOTO 140
280 PRINT "Print mode undefined at this time"
290 GOTO 140
300 END

```

This is a sample of print mode number 0

This is a sample of print mode number 1

This is a sample of print mode number 4

This is a sample of print mode number 8

QX-10 PRODUCTS

NEWS

QX-10 GRAPHICS PROGRAMS

LAKO Enterprises, 28536 Herdonwood, Farmington Hills, MI 48018, has two disks worth of 7220 programs written in Z80 assembler. They will make these disks available on Maxell gold, or Verbatim Optims DSDD disks. Documentation is included.

Computer Design Labs is planning on making the following software available through a dealer network: Business Basic; Accounting Basic, Ztel (Z80 Text Editing); Zedit text editor; Macro I, II & III Z80 Macro Assemblers; Linker; Debug I & II, CDL accounting programs, Zapple source; Modem source; Basic I & II; and QX-10 Modem program.

The Epson Connection is a bi-monthly Newsletter distributed to members of the Epson Users Group. Membership fee is \$15.00 U.S., \$18.00 Canada for one year.

All inquiries regarding membership; editorial suggestions; problem solving; questions; programs or information about forming a local Users Group should be sent to THE EPSON CONNECTION, P.O. Box 14027, Detroit, Michigan 48214.

Carolyn McCarthy / Editor
Maureen Mertz / Prod. Mgr.

Consultants & Contributing Editors
Daniel Rourke
Earl Goodrich II

UNIFORM

Micro Solutions, Software Div., 125 S Fourth St., DeKalb, IL 60115, (815) 756-3421. This program gives the QX new disk handling abilities. It will let you read or write more than 35 different diskette formats. You can copy files on MS-DOS or IBM PC-DOS disks to the QX-10 CP/M disks. This is a menu driven program.

QUERY!

Hoyle and Hoyle Software, Inc., 716 Elam Ave., Greensboro, NC 27403, (919) 378-1050. Query! is a general database management system for microcomputers. You can create up to 255 fields with 255 characters each. Query! allows 4,000 characters per record. It is made up of 8 separate programs and will sort and search any field. A separate printer program and a text formatting program, Report Writer, are also available.

Acorn Publishing Co., P.O. Box 4008, San Pedro, CA 90731, (213) 519-7509, offers educational programs and games for the QX-10. Some of the programs that are available are: Math Professor; Typing Professor; Underground City; Laser Tanks and Bumper Cars. We will have more on these software programs in our next issue.

NOTE: To all Epson Computer Dealers.

If you wish to receive a complimentary store copy of future issues of the Epson Connection, please send in your store name, address, phone number and contact person. If you have the capability of downloading software for the QX-10 please let us know so we can refer users to you.

BACK ISSUES of The Epson Connection are available, please send \$2.00 to cover postage and handling, along with your name and address. Please be sure to specify which issue(s) you are requesting. Thank you.

Rising Star Hotline Number— For problems with your Valdocs software, and questions you have not been able to get answered, call Rising Star Industries, (213) 425-2890.

HX-20 TECHNICAL NOTE

When installing Skiwriter, in an HX-20 with the expansion memory, the Expansion Box DIP switches need to be set to: OFF - ON - OFF - ON, and the two small jumpers on B. We recommend that you let a dealer check this out, and do the installation initially, as the CMOS chips are very prone to destruction from static electricity.

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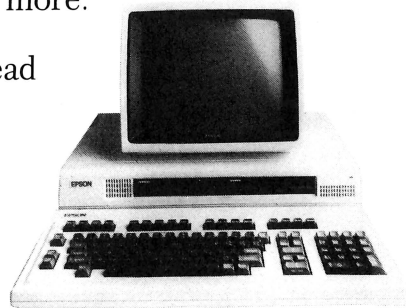
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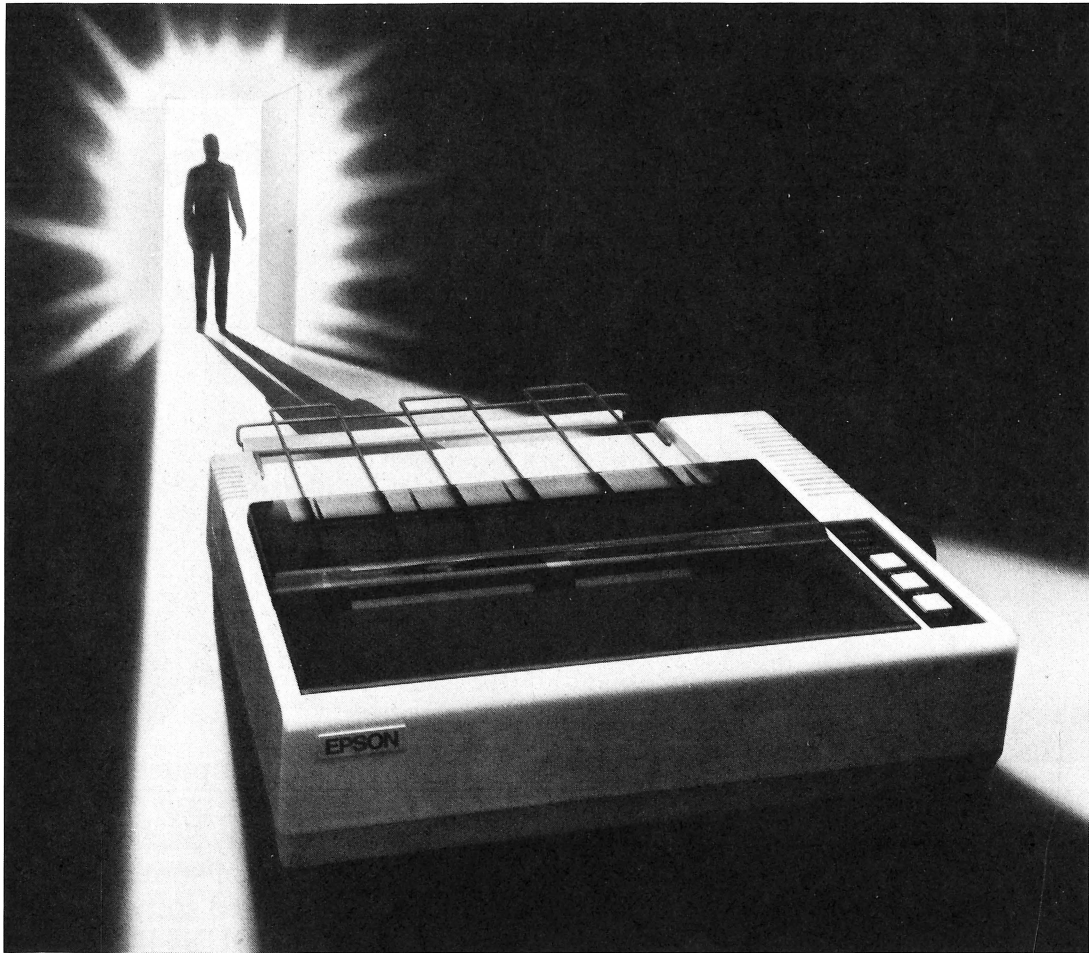


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